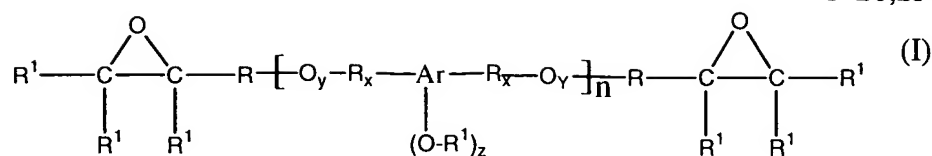


CLAIMS

1. A curable adhesive composition for anchoring materials in or to concrete or masonry comprising:
 - a. a polymerizable vinyl ester compound;
 - b. an ethylenically unsaturated monomer reactive with said polymerizable vinyl ester;
 - c. from about 5 wt% to about 10 wt% of reactive multifunctional acrylate;
 - d. curing catalyst; and
 - e. activator.
2. The adhesive composition of claim 1 wherein said polymerizable vinyl ester is present in the composition in amounts of from about 10 wt% to about 30 wt% of the composition.
3. The adhesive composition of claim 1 wherein said polymerizable vinyl ester is present in the composition in amounts of from about 10 wt% to about 25 wt% of the composition.
4. The adhesive composition of claim 1 wherein said reactive multifunctional acrylate comprises a major proportion of acrylate that is at least tri-functional.
5. The adhesive composition of claim 6 wherein said reactive multifunctional acrylate consists essentially of acrylate that is at least tri-functional.
6. The adhesive composition of claim 5 wherein said reactive multifunctional acrylate comprises acrylate that is at least tetra-functional.
7. The adhesive composition of claim 6 wherein said reactive multifunctional acrylate consists essentially of acrylate that is at least tetra-functional.
8. The adhesive composition of claim 1 wherein said polymerizable vinyl ester comprises the reaction product of an epoxy compound and a compound containing an ethylenically unsaturated group, said epoxy compound corresponding to formula (I),



wherein

Ar is substituted or unsubstituted aryl.

R is substituted or unsubstituted divalent radical derived from alkyl, oxyalkyl, arylalkyl, or oxyalkylaryl, alkyl or arylalkyl,

R¹ is independently H or R,

for each R_x, x is independently 0 or 1,

for each O_y, y is independently 0 or 1,

for each (O-R²)_z, z is independently 0 to 4,

x, y and z is each independently 0 to 5 provided that x and y can not both be zero, and n is from 1 to 5.

9. The adhesive composition of claim 1 wherein said ethylenically unsaturated monomer comprises vinyl toluene.
10. The adhesive composition of claim 9 wherein said the weight ratio of vinyl ester to said reactive diluent is from about 0.8 to about 3.
11. The adhesive composition of claim 10 wherein said ethylenically unsaturated monomer comprises vinyl toluene.
12. The adhesive composition of claim 11 wherein said ethylenically unsaturated monomer consists essentially of vinyl toluene.
13. The adhesive composition of claim 1 having a pull out performance at one hour at a temperature of 23C of at least about 70 KN.
14. The adhesive composition of claim 1 having a pull out performance at about 24 hour at a temperature of 23 of at least about 80 KN.
15. The adhesive composition of claim 1 having a pull out performance after about 24 hours at a temperature of 80°C of at least about 50 KN.

16. A curable adhesive composition for anchoring materials in or to concrete or masonry comprising:
 - a curable resin;
 - from about 5 pbwa to about 30 pbwa of reactive multifunctional acrylate;
 - curing catalyst; and
 - activator,said composition exhibiting a pull out performance after about 24 hours at a temperature of 80°C of at least about 50 KN.
17. The adhesive composition of claim 16 wherein said curable resin is selected from the group consisting of acrylic resins, vinyl ester resins, urethane resins, polyester resins and combinations of two or more of these.
18. The adhesive composition of claim 16 wherein said curable resin comprises polymerizable vinyl ester in amount of from about 10 wt% to about 25 wt% of the composition.
19. The adhesive composition of claim 18 wherein said reactive multifunctional acrylate comprises a major proportion of acrylate that is at least tri-functional.
20. The adhesive composition of claim 19 wherein said reactive multifunctional acrylate consists essentially of acrylate that is at least tri-functional.
21. The adhesive composition of claim 20 wherein said reactive multifunctional acrylate comprises acrylate that is at least tetra-functional.
22. The adhesive composition of claim 21 wherein said reactive multifunctional acrylate consists essentially of acrylate that is at least tetra-functional.